



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,492	10/02/2003	Ralf Krueger	LWEP:119US	2491
24041	7590	06/08/2006	EXAMINER	
SIMPSON & SIMPSON, PLLC 5555 MAIN STREET WILLIAMSVILLE, NY 14221-5406			PRITCHETT, JOSHUA L	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 06/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/605,492

Applicant(s)

KRUEGER, RALF

Examiner

Joshua L. Pritchett

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 8-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 8-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This action is in response to Request for Continued Examination and Amendment filed May 19, 2006. Claims 1 and 11-13 have been amended as requested by the applicant.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endou (US 5,777,783).

Endou teaches an apparatus for implementing phase-contrast or modulation contrast observation on microscopes with the aid of a modulator (26b) arranged in each pupil plane (col. 10 lines 30-31) in the observation beam path and containing at least one layer modifying the phase or amplitude (col. 10 lines 28-30) and a stop (6) arranged in the illumination beam path (Fig. 1) and a portion of at least one layer modifying the phase or amplitude is transmissive (Fig. 1). Endou further teaches the modulator are arranged on a carrier in a manner introducible into the beam path of the microscope (col. 13 lines 5-10). Endou lacks specific reference to

Art Unit: 2872

dynamically tilting the modulator. Endou does suggest that rotation of the modulator can be required in a modulation contrast image (col. 13 lines 6-8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the modulator of Endou dynamically tiltable as suggested by Endou for the purpose of allowing for modulation contrast without having to remove the modulator and replace it with another modulator.

Claims 2, 8, 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endou (US 5,777,783) in view of Wilson (US 6,687,052).

Regarding claim 2, Endou teaches the invention as claimed but lacks reference to the greatest possible phase shift achieved by a slight tilt. Wilson teaches the modulator configured so that the greatest possible phase shift is achieved by a slight tilt (col. 3 lines 56-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Endou reference have the modulator configured in the manner taught by Wilson for the purpose of minimizing the amount of rotation required by the modulator to achieve the greatest phase shift so that the modulator would not require a space large enough to rotate 180-degrees and thus reduce the size of the microscope apparatus as a whole.

Regarding claims 8 and 9, Endou teaches the invention as claimed but lacks reference to the use of a defined variable layer configuration. Wilson teaches a variable layer configuration (col. 3 lines 25-55). The pattern of modulators on the modulating element (6) is a variable layer configuration because the modulation of the incident light varies at different locations on the element. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Endou invention include the variable layer configuration of Wilson for the

Art Unit: 2872

purpose of allowing the use of a single modulator to perform different modulations depending on the area of the element light contacts.

Regarding claim 11, Endou teaches the invention as claimed but lacks reference to the use of retardation plates. Wilson teaches the use of retardation plates for use with polarization modulation (col. 3 lines 18-19). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Endou invention include the retardation plates of Wilson for the purpose of rotating the polarization to allow for as much light intensity to pass through as possible, thus providing a better image to the observer.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endou (US 5,777,783) in view of Kobayashi (US 6,057,894).

Endou teaches the invention as claimed but lacks reference to one layer comprising glass plates of various glasses. Kobayashi teaches the use of a glass layer coupled to a modulator (col. 6 lines 4-25) for the purpose of supporting the modulating layer in a high heat environment. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Endou modulator include the glass layer of Kobayashi for the purpose of supporting the modulating layer in a heated environment, where the heat originates from the light energy of the Endou invention.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endou (US 5,777,783) in view of Kobayashi (US 6,057,894) as applied to claim 3 above, and further in view of Wilson (US 6,687,052).

Endou in combination with Kobayashi teaches the invention as claimed but lacks reference to the use of a defined variable layer configuration. Wilson teaches a variable layer configuration (col. 3 lines 25-55). The pattern of modulators on the modulating element (6) is a variable layer configuration because the modulation of the incident light varies at different locations on the element. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Endou in combination with Kobayashi invention include the variable layer configuration of Wilson for the purpose of allowing the use of a single modulator to perform different modulations depending on the area of the element light contacts.

### ***Response to Arguments***

Applicant's arguments, see Amendment, filed May 19, 2006, with respect to the rejection(s) of claim(s) 1 and 11-13 under Wilson have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Endou. Applicant argues that Wilson fails to teach or suggest a dynamically tiltable modulator. Endou teaches a dynamically tiltable modulator as stated in the rejection above.

### ***Conclusion***

Art Unit: 2872

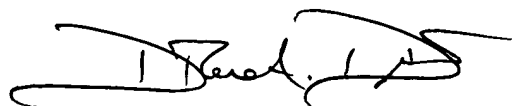
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua L. Pritchett whose telephone number is 571-272-2318.

The examiner can normally be reached on Monday - Friday 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JLP 

  
**DREW A. DUNN**  
**SUPERVISORY PATENT EXAMINER**